

# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

**Land O' Lakes, Inc.**

Whereas, THERE HAS BEEN PRESENTED TO THE

**Secretary of Agriculture**

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (T. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'L4106'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this 30th day of December in the year of our Lord one thousand nine hundred and eighty-two

Attest:

*Kenneth A. Evans*  
Acting  
Commissioner  
Plant Variety Protection Office  
Grain Division  
Agricultural Marketing Service

*John R. Block*  
Secretary of Agriculture

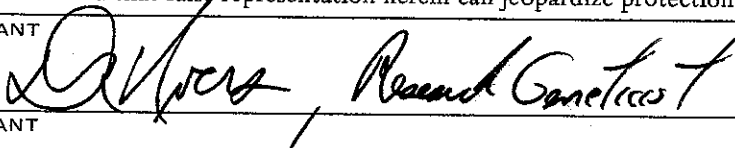


U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
LIVESTOCK, MEAT, GRAIN & SEED DIVISION

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE  
(Instructions on reverse)

FORM APPROVED: OMB NO. 0581-0005

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1. NAME OF APPLICANT(S) Land O' Lakes, Inc.		2. TEMPORARY DESIGNATION 79-3770		3. VARIETY NAME L4106	
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) R. R. 2 Webster City, Iowa 50595		5. PHONE (Include area code) 515-543-4852		FOR OFFICIAL USE ONLY PVPO NUMBER 8200136	
6. GENUS AND SPECIES NAME <u>Glycine max</u>		7. FAMILY NAME (Botanical) Leguminosae		FILING DATE 6/21/82 TIME 9:00 <input checked="" type="checkbox"/> A.M. <input type="checkbox"/> P.M.	
8. KIND NAME Soybean		9. DATE OF DETERMINATION December 1980		FEES RECEIVED AMOUNT FOR FILING \$ 500.00 DATE 6/21/82 AMOUNT FOR CERTIFICATE \$ 250.00 DATE 10/1/82	
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation				11. IF INCORPORATED, GIVE STATE OF INCORPORATION Minnesota	
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS Drew R. Ivers Land O' Lakes Research Farm R. R. 2 Webster City, Iowa 50595				12. DATE OF INCORPORATION July 8, 1921	
14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED					
a. <input checked="" type="checkbox"/> Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)		c. <input checked="" type="checkbox"/> Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)			
b. <input checked="" type="checkbox"/> Exhibit B, Novelty Statement		d. <input type="checkbox"/> Exhibit D, Additional Description of the Variety			
15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act.) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (If "Yes," answer items 16 and 17 below) <input checked="" type="checkbox"/> No					
16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input type="checkbox"/> Foundation <input type="checkbox"/> Registered <input type="checkbox"/> Certified			
18. DID THE APPLICANT(S) FILE FOR PROTECTION OF THE VARIETY IN THE U.S. OR OTHER COUNTRIES? <input type="checkbox"/> Yes (If "Yes," give names of countries and dates) <input checked="" type="checkbox"/> No					
19. HAVE RIGHTS BEEN GRANTED IN THE U.S. OR OTHER COUNTRIES? <input type="checkbox"/> Yes (If "Yes," give names of countries and dates) <input checked="" type="checkbox"/> No					
20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable. The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.					
SIGNATURE OF APPLICANT 				DATE 27 May 82	
SIGNATURE OF APPLICANT				DATE 1	

## INSTRUCTIONS

**General:** Send an original copy of the application and exhibits, at least 2,500 viable seeds, and \$500 fee (\$250 filing fee and \$250 examination fee) to U.S. Department of Agriculture, Agricultural Marketing Service, Livestock, Meat, Grain and Seed Division, Plant Variety Protection Office, National Agricultural Library Building, Beltsville, Maryland 20705. (See section 180.175 of the Regulations and Rules of Practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

### Item

- 9 Give the date the applicant determined that he had a new variety based on (1) the definition in section 41(a) of the Act and (2) the date a decision was made to increase the seed.
- 14a Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4) evidence of uniformity and stability.
- 14b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties: (1) identify these varieties and state all differences objectively; (2) attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.
- 14c Fill in the Exhibit C, Objective Description form, for all characteristics for which you have adequate data.
- 14d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 15 If "Yes" is specified (*seed of this variety be sold by variety name only as a class of certified seed*) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled, his decision published, or the certificate has been issued. However, if the applicant specified "No," he may change his choice. (See section 180.16 of the Regulations and Rules of Practice.)
- 16 See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.

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## Origin and Breeding History of the Variety:

1. L4106 is a  $F_5$  derived single plant selection from the cross: Evans X Ransom made in 1978. The Evans X Ransom cross was advanced from the  $F_1$  to the  $F_5$  by single-seed-descent.
2. L4106 was selected as a plant-row in 1979 and designated 79-3770.
3. L4106 was yield tested in replicated trials at multiple locations in 1980 and 1981.
4. L4106 was planted to a one acre increase in 1981 for initial seed stocks; and, 100 single plants were pulled.
5. L4106 was increased from 100 purification rows in 1982 to 3 bushel of Breeder's Seed.
6. L4106 may have up to 0.01% mechanical mixtures.
7. L4106 is genetically stable, being homozygous and homogeneous, and void of genetic variants.

EXHIBIT B

8200136

Novelty Statement

L4106 is most similar to the variety Williams:

L4106 differs from Williams in that:

L4106 has gray pubescence, Williams has tawny.

L4106 has yellow hilum, Williams has light black.

L4106 has the Rps<sub>1</sub> gene for PRR, Williams has rps<sub>1</sub>  
Williams 79 has Rps<sub>1</sub><sup>c</sup>.

### OBJECTIVE DESCRIPTION OF VARIETY

#### SOYBEAN (GLYCINE MAX)

**INSTRUCTIONS:** See Reverse.

NAME OF APPLICANT(S) Land O' Lakes, Inc.	FOR OFFICIAL USE ONLY
	PVPO NUMBER 8200136
ADDRESS (Street and No., or R.F.D. No.; City, State, and ZIP Code) R. R. 2 Webster City, Iowa 50595	VARIETY NAME OR TEMPORARY DESIGNATION L4106

Place the appropriate number that describes the varietal character of this variety in the boxes below.

1. SEED SHAPE: *R/S 7/23/82*

☒ 1 = SPHERICAL      2 = SPHERICAL FLATTENED      3 = ELONGATE      4 = OTHER (Specify)

2. SEED COAT COLOR: 1 = YELLOW 2 = GREEN 3 = BROWN 4 = BLACK 5 = OTHER (Specify) \_\_\_\_\_ SHADE: 1 = LIGHT 2 = MEDIUM 3 = DARK

3. SEED COAT LUSTER:		4. SEED SIZE	
2	1 = DULL 2 = SHINY	1 6	GRAMS PER 100 SEEDS

5. HILUM COLOR: 1 = BUFF 2 = YELLOW 3 = BROWN 4 = GRAY 5 = IMPERFECT BLACK 6 = BLACK 7 = OTHER (Specify)

SHADE: 1 = LIGHT 2 = MEDIUM 3 = DARK

6. COTYLEDON COLOR: *Rfs 7/23/82*  
☒ 1 1 = YELLOW 2 = GREEN

7. LEAFLET SIZE (See Reverse):  
☒ 2 1 = SMALL 2 = MEDIUM 3 = LARGE

8. LEAFLET SHAPE: 1 1 = OVATE    2 = OBLONG    3 = LANCEOLATE    4 = ELLIPTICAL    5 = OTHER (Specify)

9. LEAF COLOR (See reverse):

2 1 = LIGHT GREEN 2 = MEDIUM GREEN 3 = DARK GREEN

10. FLOWER COLOR:

1 1 = WHITE 2 = PURPLE  
3 = OTHER (Specify)

11. POD COLOR:			12. POD SET:			
1	1 = TAN	2 = BROWN	3 = BLACK	1	1 = SCATTERED	2 = CONCENTRATED

13. PLANT PUBESCENCE COLOR: SHADE:

1	1 = GRAY	2 = BROWN	3 = OTHER (Specify)	2	1 = LIGHT	2 = MEDIUM	3 = DARK
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14. PLANT TYPES (See Reverse):

3 1 = SLENDER 2 = BUSHY 3 = INTERMEDIATE

15. PLANT HABIT:

2 1 = DETERMINATE 2 = INDETERMINATE  
3 = OTHER (Specify)

<p>16. HYPOCOTYL COLOR:</p> <p><input type="text" value="1"/> 1 = GREEN    2 = PURPLE</p>	<p>17. SEED PROTEIN:</p> <p><input type="text"/> 1 = A    2 = B</p>
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<b>18. NUMBER OF DAYS TO FLOWERING</b> (Place a zero in first box (e.g. <input type="text" value="0"/> <input type="text" value="9"/> ) when days are 9 or less.)		<b>19. MATURITY GROUP:</b>					
<input type="text" value="6"/>	<input type="text" value="0"/>	<input type="text" value="5"/> I = 00	2 = 0	3 = I	4 = II	5 = III	
		6 = IV	7 = V	8 = VI	9 = VII	10 = VIII	

20. SIZE OF 10 DAY OLD SEEDLING GROWN UNDER CONSTANT LIGHT (Growth Chamber) AT 25° C. (Place a zero in first box (e.g. 0 2) when size is 9 mm. or less.)

1	8	0	MM. LENGTH OF SEEDLING	2	1	MM. LENGTH OF COTYLEDON	1	3	MM. WIDTH OF COTYLEDON
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21. DISEASE: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

<input type="text" value="0"/> BACTERIAL PUSTULE	<input type="text" value="1"/> SOYBEAN CYST	<input type="text" value="0"/> DOWNY MILDEW	<input type="text" value="0"/> PURPLE STAIN	<input type="text" value="0"/> POD AND STEM BLIGHT	<input type="text" value="0"/> ROOT KNOT
<input type="text" value="0"/> FROGEYE	<input type="text" value="0"/> STEM CANKER	<input type="text" value="2"/> PHYTO-PHTHORA	<input type="text" value="0"/> BROWN STEM ROT	<input type="text" value="0"/> TARGET SPOT	<input type="text" value="0"/> BROWN SPOT
<input type="text" value="0"/> BUD BLIGHT	<input type="text" value="0"/> WILDFIRE	<input type="text" value="0"/> RHIZOCTONIA ROT	<input type="text" value="0"/> OTHER (Specify)		

## 22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant shape	Williams	Petiole angle	Williams
Leaf shape	"	Seed size	"
Leaf color	"	Seed shape	"
Leaf surface	"	Seedling pigmentation	"

## 23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY:

VARIETY	NO. OF DAYS TO MATURITY	LODGING SCORE	PLANT HEIGHT	LEAF SIZE		CONTENT		AVERAGE NO. OF PODS PER PLANT	IODINE NO.
				Width	Length	Protein	Oil		
Submitted	137	2.2	41"	70 mm	130 mm	39.3	%	47	
Name of similar variety Williams	137	2.0	41"	70 mm	130 mm	43.4		45	

## INSTRUCTIONS

**GENERAL:** The following publications may be used as a reference aid for completing this form:

1. Scott, Walter O. and Samuel R. Aldrich, 1970, Modern Soybean Production, The Farmer Quarterly.
2. Norman, A. G., 1963, The Soybean: Genetics, Breeding, Physiology, Nutrition, Management.
3. McKie, J. W., and K. L. Anderson, 1970, The Soybean Book.

**LEAF COLOR:** Nickerson's or any recognized color fan may be used to determine the leaf color of the described variety. The following Soybean varieties may be used as a guide to identify the colors listed on the form.

COLOR	VARIETY
Light Green	"Ada"
Medium Green	"Wilkin"
Dark Green	"Swift"

**LEAF SIZE:** The following varieties may be used as a guide to identify the relative size leaves.

SIZE	VARIETY
Small	"Amsoy"
Medium	"Bonus"
Large	"Anoka"

**PLANT TYPE:** The following varieties may be used as a guide to identify the plant type.

TYPE	VARIETY
Slender	"Vansoy"
Intermediate	"Wirth"
Bushy	"Adelphia"

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